Claims

1. A tungsten carbide powder, characterised in that the powder particles have a core of cast tungsten carbide and a shell of tungsten monocarbide.

2. A tungsten carbide powder according to claim 1, characterised in that the bound carbon content is 4 to 6 wt.%, preferably 4.3 to 5.5 wt.%.

3. A tungsten carbide powder according to claim 1 or 2, characterised in that the particle size determined by Ro-Tap sieve analysis in accordance with ASTM B 214 is up to 3000 µm.

4. A tungsten carbide powder according to at least one of claims 1 to 3, characterised in that the thickness of the shell of tungsten monocarbide is 0.05 to 0.4 times the average particle size.

5. A tungsten carbide powder according to at least one of claims 1 to 4, characterised in that it has a hardness of > 2000 HV0.1.

6. A tungsten carbide powder according to at least one of claims 1 to 5, characterised in that the powder particles have a sharp-edged crushed morphology.

7. A process for the production of a tungsten carbide powder according to at least one of claims 1 to 6, characterised in that cast tungsten carbide powder is heated in the presence of a carbon source to a temperature of 1300 to 2000°C, preferably 1400 to 1700°C.

8. A process according to claim 7, characterised in that the carbon source is carbon black, graphite and/or a hydrocarbon.

9. A process according to one of claims 7 or 8, characterised in that the carbon source is added in a quantity such that the total carbon content in the reaction mixture is 4 to 6 wt.%.

10. The use of a tungsten carbide powder according to one of claims 1 to 6 for the surface coating of components subject to wear.

11. The use of a tungsten carbide powder according to one of claims 1 to 6 for the production of drill bits.